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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,036	11/06/2003	Mladen Marko Kekez	MAC 494-2	7405

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William A. Blake
Jones, Tullar & Cooper, P.C.
Eads Station
P.O. Box 2266
Arlington, VA 22202

EXAMINER	
KAPLAN, HAL IRA	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/702,036	KEKEZ ET AL.	
	Examiner	Art Unit	
	Hal I. Kaplan	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2003 and 15 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Canada on October 28, 2003. It is noted, however, that applicant has not filed a certified copy of the Canadian application as required by 35 U.S.C. 119(b).

Specification

2. The disclosure is objected to because of the following informalities: Page 1, line 18 contains the word "Lexington". It appears this should be "Johannessen". Page 5, line 22 contains the phrase "Frame 3, 36". It appears this should be "Frame C, 36". Page 6, line 10 contains the phrase "represented as a load". It appears this should be "represented as a resistor".

Appropriate correction is required.

The disclosure is objected to under 37 CFR 1.71(a) because it is not sufficiently enabling.

The specification states that a capacitive load can be connected in parallel to the main delay line or one of the smaller delay lines (see page 6, lines 15-18 and claims 4 and 8). If the capacitor is connected in parallel with a delay line, current will flow through the delay line and not through the capacitor because the impedance of the line is smaller than the impedance of the capacitor. As a result, the capacitor will never charge, and will not work properly. In addition, the specification states that this

"enhances the value of the total power" available in the oscillatory circuit (see page 6, lines 16-17). It is not clear what this means or why it is advantageous.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the capacitor connected parallel to the main delay line or one of the smaller delay lines, as claimed in claims 4 and 8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6 and 10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 6 and 10 recite the limitation "a resistor represents the quarter-wave trap". Representation, such as representing the quarter-wave trap by a resistor in a drawing, is an abstract idea with no tangible structure, and it has been held that abstract ideas are not patent-eligible. See *Diamond v. Chakrabarty*, 447 U.S. 303, 206 USPQ 193 (1980), and MPEP §2105.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US patent of Gale (4,165,482) in view of the US patent of Boby (4,542,358) and the US patent of Kassabgi (3,631,266).

As to claim 1, Gale, drawn to cable fault location, discloses a radio frequency (RF) pulse generating device comprising: a main delay line (10) and a low impedance electrically driven impulse generator (14-26) (see column 4, lines 18-20 and column 5, lines 13-20), the main delay line (1) being connected to the electrically driven impulse generator at one end. Gale does not disclose (1) a quarter-wave trap or (2) the main delay line being short-circuited at an opposite end.

Boby, drawn to a device protecting a coaxial cable against high-powered, low-frequency spurious pulses, discloses a quarter-wave trap between a pulse generator and a main delay line (see column 1, lines 51-53 and column 2, lines 46-52). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect a quarter-wave trap between the impulse generator and main delay line of

Gale, in order to protect the main delay line against unwanted high-powered, low-frequency pulses. Boby does not disclose the main delay line being short-circuited at an opposite end.

Kassabgi, drawn to a delay line pulse generator, discloses transmission of a pulse via a short-circuited delay line (DL) (see column 2, lines 11-19). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to short-circuit the delay line of Gale in view of Boby, in order to allow for testing of the device.

As to claim 5, Gale discloses an impulse generator comprising a capacitor (16) connected in series with an internal delay line (18) and a switch (17) (see column 4, lines 30-33).

9. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Boby, and further in view of the US patent of Luu (6,225,864).

As to claim 2, Gale in view of Boby disclose all of the claimed features, as set forth above, except for an antenna. Luu, drawn to an RF amplifier having a dual slope phase modulator, discloses an antenna (22), the antenna being connected as the load of a pulse generator circuit (see column 3, lines 23-26). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect an antenna as the load of the circuit at the opposite end of the delay line of Gale in view of Boby, in order to transmit RF signals with minimal or no phase error.

As to claim 9, Gale discloses an impulse generator comprising a capacitor (16) connected in series with an internal delay line (18) and a switch (17) (see column 4, lines 30-33).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Boby and Kassabgi, and further in view of the US patent of Ross (3,402,370).

As to claim 3, Gale in view of Boby and Kassabgi disclose all of the claimed features, as set forth above, except for the main delay line being comprised of two or more smaller delay lines connected in series. Ross, drawn to a pulse generator, discloses a pulse generator (1,2) connected to a main delay line comprised of two smaller delay lines (3,4) connected in series. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use two smaller delay lines in series as the main delay line, in order to make it easier to repair the main delay line in the event of a fault.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Boby and Kassabgi, and further in view of the US patent of Tsuru et al. (6,864,760).

As to claim 4, Gale in view of Boby and Kassabgi disclose all of the claimed features, as set forth above, except for a capacitor connected paralled to the main delay line or one of the smaller delay lines. Tsuru, drawn to a delay line with a parallel capacitance for adjusting the delay time, discloses a capacitor (14) connected parallel to a delay line (12) (see column 1, lines 63-67 and column 3, lines 6-7). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect a capacitor in parallel with the main delay line of Gale in view of Boby and Kassabgi, in order to allow the delay time to be continuously adjusted as needed.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Boby and Luu, and further in view of Ross. Gale in view of Boby, Luu, and Ross disclose all of the claimed features, as set forth above.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Boby and Luu, and further in view of Tsuru. Gale in view of Boby, Luu, and Tsuru disclose all of the claimed features, as set forth above.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents to Berry et al. (3,205,375) and Via (6,355,992) disclose similar devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hik

BRIAN SIRCUS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800